Abstract of the Disclosure

The present invention enables a facility (home, business or industrial site) to optimize the consumption of energy in that facility. In this invention, the power companies that supply energy provide information to its client facilities on the cost and availability of energy from that company on a real-time basis. Each client facility would have a power accounting server. These servers store this and process this information to predict when the rates for using the energy will be the least expensive for a particular task or to operate a particular appliance. A homeowner (client facility) for example can program appliances such as a dishwasher or laundry machine to turn on when the cost of energy is below a particular threshold price. The present invention has the capability to receive characteristics about a particular appliance, generate a list of energy consumption options for that particular product at a particular time period and select and implement the most efficient energy supply option. This invention can also enable a client facility that generates energy to efficiently use the generated energy and sell any excess energy to another end user or to other energy consumers.